

REMARKS

Claims 1-5 are pending in the application. Of these pending claims, Claims 2 and 3 stand rejected under 35 U.S.C. §112, second paragraph; Claims 1, 3 and 4 stand rejected under 35 U.S.C. §102(b) as being anticipated by Zimmerman, et al. (U.S. Patent No. 5,325,728); Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zimmerman, et al. in view of Hoult, et al. (U.S. Patent No. 5,735,278); and Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zimmerman, et al. in view of Duerr, et al. (U.S. Patent No. 6,131,396).

By this amendment, Claims 1-5 have been amended and new Claims 6-17 have been added. The basis for these amendments can be found throughout the specification, claims and drawings as originally filed. No new matter has been added. The preceding amendments and the following remarks are believed to be fully responsive to the outstanding Office Action and are believed to place the application in condition for allowance.

In view of the preceding amendments and the following remarks, the rejections are traversed and reconsideration of this application is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §112

Claims 2 and 3 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. By this amendment, the above identified claims have been amended in a non-narrowing manner to particularly point out and distinctly

claim the subject matter which Applicant regards as the invention so as to overcome the rejection under 35 U.S.C. §112, second paragraph. Accordingly, withdrawal of this rejection is respectfully requested.

REJECTIONS UNDER 35 U.S.C. §102(b) AND §103(a)

Claims 1, 3 and 4 stand rejected under 35 U.S.C. §102(b) as being anticipated by Zimmerman, et al. (U.S. Patent No. 5,325,728); Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zimmerman, et al. in view of Hoult, et al. (U.S. Patent No. 5,735,278); and Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zimmerman, et al. in view of Duerr, et al. (U.S. Patent No. 6,131,396). Applicant respectfully traverses these rejections.

In this regard, independent Claim 1 has been amended to be directed to a patient-shielding and coil system for use with a surgical navigation system that determines the position and orientation of a surgical probe within a surgical region of a patient. This system includes a coil wire electrically coupled to a source of electrical current, where the coil wire is operable to generate a magnetic field for use in navigating the surgical probe, an electrically conductive surface, insulation material situated between the coil wire and the conductive surface, and a drain wire connected to the conductive surface and forming a capacitive current loop with respect to the source, such that the capacitive current generated by the magnetic field is reduced in the patient while the magnetic field used for navigation substantially remains the same.

In contrast, Zimmerman, et al. is directed to an electromagnetic flow meter for use in measuring the flow of blood through a conduit. The electromagnetic flow meter includes a coil assembly 44, shown in Figure 10, which includes an outer magnetic shield 83. The outer magnetic shield 83 is placed around a coil 70 and outside an electrostatic shield 74 to thereby shunt magnetic fields that would otherwise be affected by nearby magnetic or conductive surfaces and will distort the field passing through the insert (see column 8, lines 17-25). In other words, the coil assembly 44 includes an outer shield 83, which shunts or prevents the electromagnetic field from emanating out beyond the coil 70. Accordingly, Zimmerman, et al. does not teach or suggest generating a magnetic field for use in navigating a surgical probe, nor does Zimmerman, et al. teach or suggest reducing capacitive current generated by the magnetic field in a patient, while the magnetic field used for the navigation substantially remains the same, as set forth in Applicant's independent Claim 1. In fact, Zimmerman, et al. teaches away from generating a magnetic field for use in navigating a surgical probe by identifying an outer magnetic shield 83 that prevents a magnetic field from generating out beyond the coil 70. Moreover, Zimmerman, et al. is not directed to a surgical navigation system whatsoever, but is simply directed to an electromagnetic flow meter. Accordingly, Zimmerman, et al. does not teach or suggest Applicant's independent Claim 1, along with its corresponding dependent claims.

Likewise, Hoult, et al. is directed to performing a surgical procedure using magnetic resonance imaging. Duerr, et al. is directed to a heat radiation shield for use with diagnostic nuclear magnetic resonance low field systems. Here again, neither Hoult, et al. nor Duerr, et al. teaches or suggests a patient-shielding and coil system for

use in a surgical navigation system that determines the position and orientation of a surgical probe within a surgical region, wherein capacitive current generated by a magnetic field is reduced in the patient, while the magnetic field used for navigation substantially remains the same, as set forth in Applicant's independent Claim 1. Moreover, the combination of Hoult, et al. with Duerr, et al. and Zimmerman, et al. also do not provide such a teaching. In fact, there would be no motivation or suggestion to combine an electromagnetic flow meter of Zimmerman, et al. with a surgical procedure using magnetic resonance imaging of Hoult, et al. with the heat radiation shield of Duerr, et al. Accordingly, Applicant respectfully submits that independent Claim 1, along with its corresponding dependent claims are not taught or suggested by the prior art of record.

By way of the foregoing discussion and amendments, Applicant has now demonstrated the claims present in the application are not anticipated, nor rendered obvious in view of the cited references, or the combination thereof.

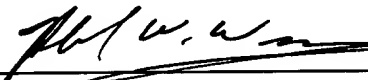
CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the

Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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